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Nevada Test Organization
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U.S. ATOMIC ENERGY
COMMISSION
DIV OF HEALTH & MED

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A preliminary report on the manned station experiment, conducted in connection with the Diablo shot this morning, was released by the Test Organization at 12 noon. It was based on a preliminary report by Robert L. Corsbie, Director, Civil Effects Test Group.

In a meeting with the press on June 26, Mr. Corsbie said that a small group of men from the Naval Radiological Defense Laboratory and from the Atomic Energy Commission would be confined in a closed shelter for several hours spanning the time of a nuclear detonation.

The purpose was the proof-testing of the components of a pre-planned countermeasure system. It included the study of the psychological effect of confinement in the shelter with reference to the group's ability to analyze the post-shot situation and make command decisions, as for instance for determining when the external radiation would permit safe activation of a decontamination plan. A secondary purpose was a time-function study of decontamination procedures. The experiment was not intended to measure blast resistance of the shelter.

The shelter used was described as a conventional type that had been tested previously for blast resistance and would be fully safe for the Diablo shot. It is of steel, with a minimum of three feet of earth shielding, is equipped with water, food, and toilet facilities, and is designed to provide shelter for several days to a week.

The roof has a number of openings through which the men inside can pass instruments for measuring radiation levels. It is equipped with wind speed and direction gauges, a small elevator to bring in samples of fallout debris for analysis, and has a periscope for viewing the exterior.

The shelter is located about 2000 yards from the Diablo ground zero point.

Mr. Corsbie's preliminary report follows:

"An underground manned radiological shelter was occupied by 16 persons as planned at about 2400 hours D-1 and secured at 0200 hours D day. All exterior vents, doors, and other openings were secured at H-30 minutes and ventilation was shut off.

"The shelter received no structural damage from the predicted blast loadings. There was superficial damage to a thin plywood partition which separated the generator room from the tunnel entrance to the shelter.

(more)

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"All instrumentation was operable at H-hour and excellent results appear to have been gained. The maximum exterior radiation dose rate at ground level over the shelter, as read by remote radiation detection instruments, was about 60r per hour. The maximum radiation reading inside the shelter was near the bulkhead door between the shelter proper and the open tunnel entrance, but usable numbers are not yet available. At Hplus 15 minutes the average reading inside the shelter was about 10 mr.

"The average radiation received by personnel in the shelter was of the order of 50 to 100 mr. by Hplus 2 hours. By Hplus 3 hours the radiation inside the shelter averaged about 2 mr.

"The shelter received radiation higher than the minimum which had been estimated to obtain data. Therefore, phase 2 of the experiment involving earth moving, plowing and other procedures designed to reduce levels of radiation to permit the recovery of a pilot area approximating 2500 square feet, is being deferred until 0900 hours Dplus 1.

"In view of deferring phase 2 of the project, project personnel were to be evacuated from the shelter at about 1200 hours D day, the exact time and conditions depending upon the rad-safe situation. R. L. Corsbie, Director, CETG, was evacuated from the area by helicopter at about 0810 hours."

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